

**FINDING OF NO SIGNIFICANT IMPACT**  
**Construction and Operation of an Emergency Services Center**  
**United States Air Force Academy, Colorado**

An Environmental Assessment (EA) has been developed in accordance with the requirements of the National Environmental Policy Act (NEPA) of 1969, the Council on Environmental Quality (CEQ) regulations, and implementing regulations set forth in 32 CFR §989 (*Environmental Impact Analysis Process*), as amended, to analyze a U.S. Air Force Academy (Academy) proposal to construct and operate an Emergency Services Center (ESC).

PURPOSE AND NEED

The Academy proposes to construct and operate an ESC. The purpose of the Proposed Action is to provide and maintain adequate emergency operation functions including implementation of the Homeland Security Presidential Directive/HSPD-5 *Management of Domestic Incidents*, and to support the National Incident Management System (NIMS) and the National Response Plan (NRP). The ESC will be sited, constructed, and operated in accordance with United Facilities Criteria (UFC) 4-140-04 *Emergency Operations Center Planning and Design* (U.S. Department of Defense [DoD] 2008).

The Proposed Action is needed because the current Security Forces (SF) Headquarters (Building 8024) is outdated, located in a flood zone, and no longer meets space requirements. Additionally, the current SF Headquarters is not centrally located, as required by UFC 4-140-04 (it is located at the far southern end of the Academy). Emergency operation functions are currently fragmented due to their locations at separate facilities throughout the Academy. Although the primary functions of SF operations are conducted in Building 8024, portions of the SF squadron are located in a converted housing unit and a detached garage (Buildings 8020 and 8028). The 911 call dispatch center is staffed remotely, sharing insufficient space at Fire Station 3. The dispatch center does not meet Air Force design standards. Space is inadequate for current operations and there is no dedicated communications control room or emergency response center.

DESCRIPTION OF THE PROPOSED ACTION

The Academy proposes to construct and operate an ESC that is compliant with all current Air Force and DoD requirements and guidance. The proposed ESC will include an Emergency Communications Center (i.e., the 911 dispatch center function), ESC Command Center, administrative and training space, investigations, law enforcement, armory, holding cells, mechanical equipment room, storage area, lighted parking, landscaping, and all associated utilities.

The Proposed Action components will encompass approximately 28,711 square feet and will include a reinforced concrete slab on grade, a reinforced foundation, structural steel framing, exterior window curtain walls with aluminum mullions, all supporting building systems, a modified bitumen roof system, an emergency generator, interior architectural finishes, site preparation, and development to include walkways, landscaping, parking areas with access drives, and integrated force protection solutions. The parking area will contain approximately 200 standard-sized vehicle spaces and will be sited according to AT/FP standards.

*Construction and Demolition Activities*

Implementation of the Proposed Action will require general site clearing, grading and building construction. Existing utilities are readily available for extension to the proposed site. The area of construction will require storing of heavy equipment during non-work times. The equipment will consist of excavators, front-end loaders and dump trucks. During construction of the Proposed Action structure, equipment (such as cranes) will occupy the construction area.

Report Documentation Page				Form Approved OMB No. 0704-0188	
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.					
1. REPORT DATE <b>NOV 2011</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2011 to 00-00-2011</b>	
4. TITLE AND SUBTITLE <b>Finding of No Significant Impact: Construction and Operation of an Emergency Services Center United States Air Force Academy, Colorado</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>10 Civil Engineer Squadron (45 CES/CECP),8120 Edgerton Drive,USAF Academy,CO,80840</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>42</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			



Three existing buildings that are located in the southern portion of the Academy and are currently being used by the SF (Buildings 8020, 8024, and 8028) will be decommissioned and demolished during the proposed action. The total square footage of these facilities is 11,538. The decommissioning and demolition will occur following completion of the ESC construction. Following demolition, the land will be restored to a natural, predevelopment condition.

### *Operation*

Once operational, the SF, the Fire Department (FD), the 10th Air Base Wing (ABW) Command Post, and the 10th Communication Squadron (CS) will occupy the proposed ESC. These end users will perform the same functions that they are currently performing at various locations on the Academy, including police functions (e.g., general law enforcement, investigations, booking, weapons cleaning and maintenance), 911 services, general administrative functions, and training.

In accordance with U.S. Air Force (USAF) policy, the Academy will apply sustainable development concepts during the planning, design, construction, operation, and maintenance phases of the proposed ESC. The proposed ESC will be designed, constructed, and operated with the capability of achieving a Leadership in Energy and Environmental Design (LEED) Silver certification.

### ALTERNATIVES CONSIDERED

**Preferred Alternative.** The Preferred Alternative will site the proposed ESC on an approximately seven acre tract that is bordered to the north by Academy Drive, to the east by Fire Station 2 and the 10th Communications Squadron buildings, and to the west and south by open land. The 10th Medical Group Clinic is located approximately 1,000 feet southwest of the site. Currently, the Preferred Alternative site is in a natural state composed of grasses, shrubs, and pine trees. The site is generally level. A Giant Voice Tower is located near the southern portion of the site. The tower will need to be relocated if it is determined to be in the footprint of the proposed facility or within AT / FP standoff distances.

**Alternative 2.** The Alternative 2 site is located northwest of the intersection of Academy Drive and Interior Drive. The site consists of grasses, shrubs, and pine trees and is mostly flat in topography with a steep drop-off on the north side of the proposed site. This location provides sufficient available open land, is easily accessible from Academy and Interior Drives, and is centrally located within the Academy base populace.

**No-Action Alternative.** The No Action Alternative would maintain the status quo, and the proposed facilities would not be constructed to accommodate the emergency services described in the description of the Proposed Action. Under the No-Action Alternative, the daily operations of the 911 call dispatch center, Security Forces, and Emergency Management would continue to be hindered and work adjustments will remain in effect to accomplish the mission. Productivity, efficiency, effectiveness, and quality of life would continue to be negatively impacted by not having an adequate consolidated facility to meet mission needs or subsequent mission increases. The current facilities would continue to be overcrowded and training functions will continue to be limited.

**Other Alternatives Considered but Eliminated from Further Study.** The following sites were initially considered but eliminated because they did not meet the screening criteria.

#### *Expand and Renovate the Current Security Forces Facility*

The Air Force considered renovating and expanding the current SF facility (Building 8024). However, this alternative was eliminated from consideration because the site is not centrally located (it is located in the southern portion of the Academy) and the available space was not large enough for the conceptual

building footprint without impeding into the 100-year floodplain and potentially impacting habitat for the federally threatened Preble's meadow jumping mouse.

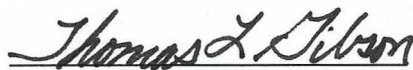
*Locate the ESC North of the Current Security Forces Facility*

The Air Force considered siting the ESC on undeveloped land located immediately north of the current SF facility, but removed the site from consideration because it is not centrally located and did not provide the proper size and configuration for the proposed building footprint.

ENVIRONMENTAL IMPACTS SUMMARY

Six environmental resource areas were characterized and evaluated in the EA. The analysis determined that no significant impacts will result from implementation of the Proposed Action at either the Preferred Alternative site or the Alternative 2 site. In summary, implementation of the Proposed Action at either Preferred Alternative or Alternative 2 sites will result in minor, temporary, short-term impacts to air quality due to construction activities. Additionally, minor, short-term negative impacts will occur to water resources, biological resources and hazardous and toxic materials. Minor short-term and long-term changes to land use and utilities will occur as a result of the Proposed Action. No impacts to cultural resources are anticipated. The Proposed Action at the Preferred Alternative site, when combined with other past, present, and reasonably foreseeable future projects in the general vicinity, will not result in significant cumulative impacts.

**Finding of No Significant Impact:** Based on information and analysis presented in the EA and review of public and agency comments submitted, I conclude that implementation of the Proposed Action at the Preferred Alternative site will not constitute an action that significantly affects the quality of the human environment due to the findings listed above and expanded upon in the EA. Accordingly, a Finding of No Significant Impact is made for this project and an environmental impact statement under the National Environmental Policy Act is therefore not necessary.

  
THOMAS L. GIBSON, Col, USAF  
Commander, 10th Air Base Wing

8 Feb 12  
Date



# **Final Environmental Assessment**

## **Construction and Operation of an Emergency Services Center**

### **U.S. Air Force Academy, Colorado**

USAF 10 CES/CECP  
8120 Edgerton Drive  
United States Air Force Academy, Colorado 80840

November 2011

**Final**

**Environmental Assessment  
Construction and Operation of an  
Emergency Services Center  
U.S. Air Force Academy**

**November 2011**

**Prepared for:**  
U.S. Air Force Academy  
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## ACRONYMS AND ABBREVIATIONS

µg/m <sup>3</sup>	micrograms per cubic meter	ESA	Endangered Species Act
ABW	Air Base Wing	FD	Fire Department
AFH	Air Force Handbook	FEMA	Federal Emergency Management Agency
AFI	Air Force Instruction		
AIRFA	American Indian Religious Freedom Act	FONSI	Finding of No Significant Impact
APE	Area of Potential Effects	HUC	Hydrologic Unit Code
AT/FP	Anti-Terrorism/Force Protection	HVAC	heating, ventilation, and air conditioning
BCC	Bird of Conservation Concern	ICRMP	Integrated Cultural Resource Management Plan
BEA	Bureau of Economic Analysis	IHMP	Installation Hazmat Management Process
BLS	Bureau of Labor Statistics	INRMP	Integrated Natural Resources Management Plan
BMP	best management practice		
BRAC	Base Realignment and Closure	ISCP	Installation Spill Contingency Plan
CAA	Clean Air Act	LEED	Leadership in Energy and Environmental Design
CAIR	Clear Air Interstate Rule	MBTA	Migratory Bird Treaty Act
CCC	Civilian Conservation Corps	MS4	Municipal Separate Storm Sewer System
CDPHE	Colorado Department of Health and Environment	MSA	Metropolitan Statistical Area
CEQ	Council on Environmental Quality	NAAQS	National Ambient Air Quality Standards
CFR	Code of Federal Regulations	NABCI	North American Bird Conservation Initiative
CO	carbon monoxide	NAGPRA	Native American Graves Protection and Repatriation Act
CS	Communication Squadron		
CSU	Colorado Springs Utilities	NEPA	National Environmental Policy Act
CWA	Clean Water Act	NHPA	National Historic Preservation Act
dB	decibel	NO <sub>2</sub>	nitrogen dioxide
dBA	A-weighted decibel	Nox	nitrogen oxides
DoD	U.S. Department of Defense	NOA	Notice of Availability
EA	Environmental Assessment	NOI	Notice of Intent
ECM	Erosion Control Measure	NPDES	National Pollutant Discharge Elimination System
EIAP	Environmental Impact Analysis Process		
EIS	Environmental Impact Statement	NRCS	Natural Resource Conservation Service
EISA	Energy Independence and Security Act	NRHP	National Register of Historic Places
EO	Executive Order		
ESC	Emergency Services Center		
EPA	U.S. Environmental Protection Agency		

O3	Ozone	Tpy	Tons per year
OSHA	Occupational Safety and Health Administration	TSCA	Toxic Substances Control Act
OWS	Oil/Water Separator	UFC	Unified Facilities Criteria
Pb	Lead	USACE	U.S. Army Corps of Engineers
		USAF	U.S. Air Force
PM2.5	particulate matter with an aerodynamic size less than or equal to 2.5 microns	USDA	United States Department of Agriculture
PM10	particulate matter with an aerodynamic size less than or equal to 10 microns	USFWS	U.S. Fish and Wildlife Service
PMJM	Preble's meadow jumping mouse	UST	underground storage tank
POL	Petroleum, oils and lubricants	VOC	volatile organic compound
POV	Personal Occupancy Vehicle	WWTP	wastewater treatment plant
PPACG	Pikes Peak Area Council of Governments		
ppm	parts per million		
PSD	Prevention of Significant Deterioration		
RCRA	Resource Conservation and Recovery Act		
REC	Recognized Environmental Conditions		
ROI	Region of Influence		
RTV	rational threshold value		
SDD	Sustainable Design and Development		
SF	Square Feet		
SHPO	State Historic Preservation Office		
SIP	State Implementation Plan		
SO2	sulfur dioxide		
SOP	standard operating procedure		
SOx	sulfur oxides		
SPCC	Spill Prevention, Control, and Countermeasures		
SVOC	semi-volatile organic compound		
SWMP	Stormwater Management Plan		
SWPPP	Storm Water Pollution Prevention Plan		
SY	Square Yards		
TEOM	Tapered Element Oscillating Microbalance		

## ORGANIZATION OF THE DOCUMENT

The following is an Environmental Assessment (EA) for the proposed construction and operation of an Emergency Services Center (ESC) at the United States Air Force Academy, Colorado (the Academy). The EA is organized into the following sections:

- *Section 1 – Purpose of and Need for Action:* describes the purpose of and need for the project as well as the general extent of proposed project activities.
- *Section 2 – Description of the Proposed Action and Alternatives:* provides background information for the project and describes the Proposed Action in detail. Also included in this section is a description of the alternatives that were considered for achieving the stated purpose, including any alternatives that were eliminated from detailed study.
- *Section 3 – Affected Environment:* provides a description of existing resources that have the potential to be affected by the Proposed Action Alternatives and the No Action Alternative.
- *Section 4 – Environmental Consequences:* describes the environmental effects of implementing the Preferred Action Alternative, the No Action Alternative, and any other alternatives carried forward for analysis. The analysis is organized by resource and considers both direct and indirect effects. The effects of the No Action Alternative provide a baseline for evaluation and comparison. Mitigations and actions included in the Proposed Action that may be taken to reduce impacts to resources are also discussed.
- *Section 5 – List of Preparers:* provides information regarding the interdisciplinary staff involved in preparing the EA.
- *Section 6 – Persons and Agencies Consulted:* lists those persons and agencies either consulted during preparation of the EA or sent a copy of the Draft EA for review and comment.
- *Section 7 – References:* provides citations for documents and other materials used to prepare the EA.

# **Final Environmental Assessment Emergency Services Center U.S. Air Force Academy**

## **1. PURPOSE OF AND NEED FOR ACTION**

### **1.1 Introduction**

This section describes the purpose of and need for the United States Air Force Academy (the Academy) proposal to construct and operate an Emergency Services Center (ESC) to enhance support of existing and future missions by providing adequate emergency operations functions. It also includes summaries of the scope of the environmental review and the applicable regulatory requirements.

Federal agencies are required to consider the environmental consequences of proposed actions in the decision-making process under the National Environmental Policy Act (NEPA) of 1969 (42 United States Code [USC] Sections 4321 to 4370d), the Council on Environmental Quality's (CEQ) implementing regulations (40 Code of Federal Regulations [CFR] Parts 1500–1508), and the Department of the Air Force Environmental Impact Analysis Process (32 CFR Part 989). This Environmental Assessment (EA) for the proposed construction and operation of an ESC at the Academy is being prepared in accordance with NEPA. This EA evaluates the potential environmental impacts associated with the Proposed Action.

The Academy encompasses 18,455 acres and is situated along the Rocky Mountain Front Range in Colorado about six miles north of downtown Colorado Springs and approximately 60 miles south of Denver. The Academy land covers an area that is about five miles wide by seven miles long. The Rampart Range, which forms the western boundary of the Academy, is a north-south trending uplift within the Front Range that extends from Platte Canyon near Denver south to Pikes Peak. The 14,110-foot Pikes Peak is approximately 10 miles southwest of the Academy.

The Academy is located in El Paso County, which has a total population of 622,263 (U.S. Census Bureau 2010). Within the county are two small towns north of the Academy, Palmer Lake (population 2,361) and Monument (population 4,903). The City of Colorado Springs, with 372,432 inhabitants, is south and southeast of the Academy (City Data 2011). **Figure 1-1** provides the location of the Academy.

### **1.2 Purpose and Need for the Proposed Action**

The Academy proposes to construct and operate a new Emergency Services Center. The purpose of the Proposed Action is to provide and maintain adequate emergency operation functions including implementation of the Homeland Security Presidential Directive/HSPD-5 *Management of Domestic Incidents* and to support the National Incident Management System (NIMS) and the National Response Plan (NRP). The ESC would be sited, constructed, and operated in accordance with United Facilities Criteria (UFC) 4-140-04 *Emergency Operations Center Planning and Design* (U.S. Department of Defense [DoD] 2008).

The Proposed Action is needed because the current Security Forces (SF) Headquarters (Building 8024) is outdated, located in a flood zone, and no longer meets space requirements. Additionally, the current SF



Headquarters is not centrally located, as required by UFC 4-140-04 (it is located at the far southern end of the Academy). Emergency operation functions are currently fragmented due to their locations at separate facilities throughout the Academy. Although the primary functions of SF operations are conducted in Building 8024, portions of the SF squadron are located in a converted housing unit and a detached garage (Buildings 8020 and 8028). The 911 call dispatch center is staffed remotely, sharing insufficient space at Fire Station 3. The dispatch center does not meet Air Force design standards. Space is inadequate for current operations and there is no dedicated communications control room or emergency response center.

### 1.3 Scope of the Analysis

The Academy has prepared this EA to assess the potential environmental impacts resulting from construction and operation of a new ESC facility at the Academy.

This environmental analysis has been conducted in accordance with the President's Council on Environmental Quality (CEQ) regulations, Title 40 of the Code of Federal Regulations (CFR) §§ 1500-1508, as they implement the requirements of the National Environmental Policy Act (NEPA) of 1969, 42 U.S.C. §4321, et seq., and Air Force Instruction (AFI) 32-7061, The Environmental Impact Analysis Process (EIAP), as promulgated in Title 32 CFR Part 989. Title 32 CFR 989 addresses implementation of NEPA and directs Air Force officials to consider environmental consequences as part of the planning and decision-making process. These regulations require federal agencies to analyze the potential environmental impacts of the Proposed Action and alternatives and to use these analyses in making decisions on a Preferred Alternative. Cumulative effects of other ongoing activities also must be assessed in combination with the Preferred Alternative. The CEQ was instituted to oversee federal policy in this process. The CEQ regulations declare that an EA is required to accomplish the following objectives:

- Briefly provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).
- Aid in an agency's compliance with NEPA when an EIS is not necessary and facilitate preparation of an EIS when necessary.

The Air Force implementing regulations for National Environmental Policy Act (NEPA) are found at 32 CFR Part 989, *Environmental Impact Analysis Process*. The EIAP requires the Air Force to address environmental impacts through consideration and documentation of the environmental effects of a proposed action, as well as reasonable alternatives to the Proposed Action and the No Action Alternative. Every EA must lead to either a FONSI, a decision to prepare an EIS, or selection of the No Action alternative. The EIAP ensures compliance with the NEPA and CEQ regulations.

This EA evaluates the potential environmental impacts that may result from the implementation of the Proposed Action as well as possible cumulative impacts from other actions planned for the Academy. The EA also identifies required environmental permits relevant to the Proposed Action. As appropriate, the affected environment and environmental consequences of the Proposed Action may be described in terms of site-specific descriptions or regional overview. Finally, the EA identifies any mitigation measures that would be required to prevent or minimize environmental impacts, as well as cumulative and long term impacts.

## CCLD Regional Location

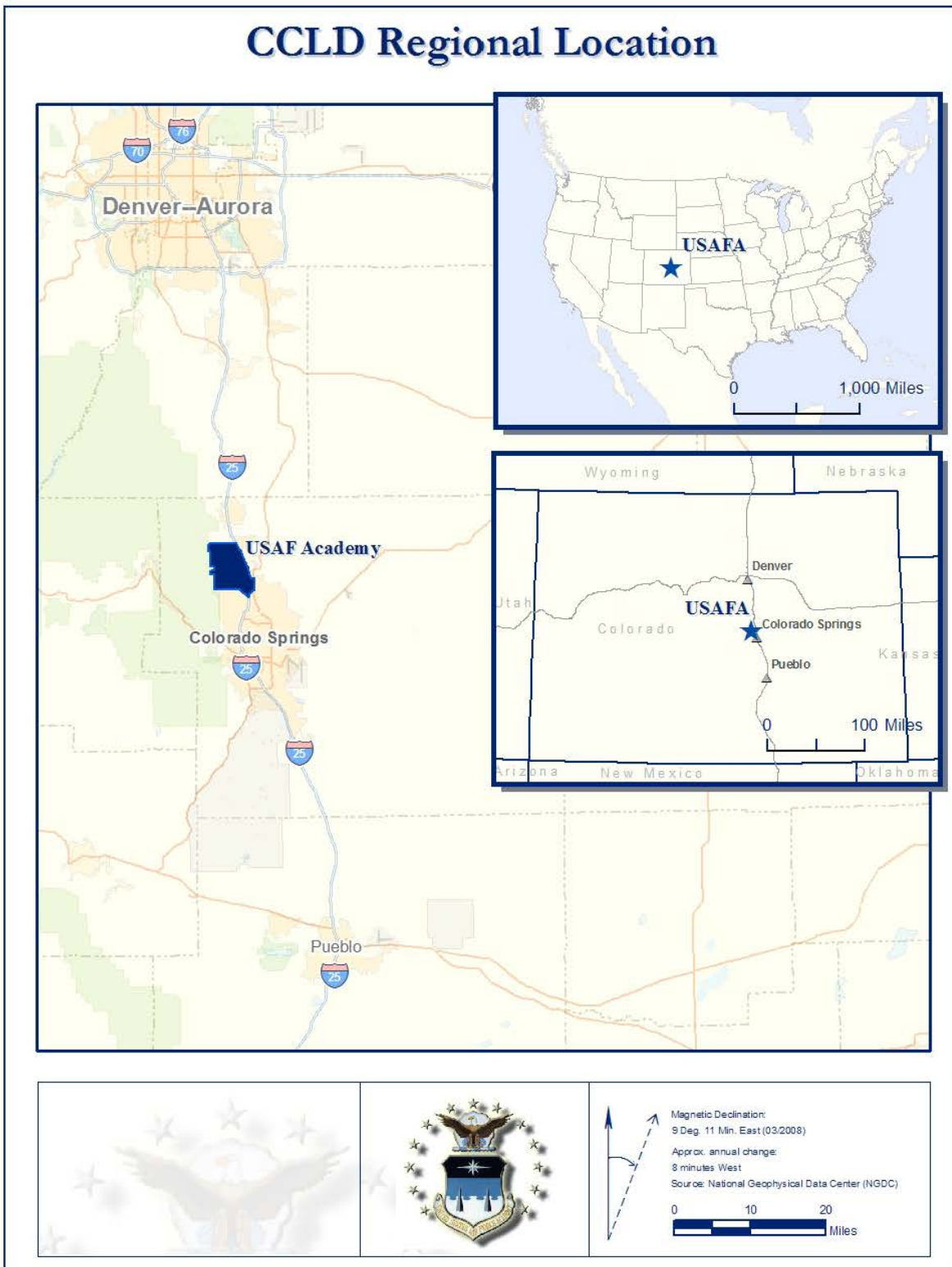


Figure 1-1. Location map for the U.S. Air Force Academy, Colorado.

## 1.4 Regulatory Framework

Federal, state, and local laws and regulations potentially applicable to this Proposed Action are specified, where appropriate, within this EA, and include but are not limited to:

- Air Force Policy Directive (AFPD) 91-2 – Safety Programs (28 September 1993);
- Migratory Bird Treaty Act, 16 USC 703-712, 3 July 1918, as amended 1936, 1960, 1968, 1969, 1974, 1978, 1986, and 1989);
- Endangered Species Act (ESA) of 1973, as amended (7 USC 136; 16 USC 1531 *et seq.*);
- National Historic Preservation Act of 1966, as amended (36 CFR Part 800);
- Federal Clean Air Act (CAA) of 1990 (42 USC §7401 *et seq.*, as amended);
- Native American Graves Protection and Repatriation Act, as amended (25 USC 3001 *et seq.*);
- Federal Water Pollution Control Act, or Federal Clean Water Act (CWA), of 1972, as amended; Sections 401 and 404;
- EO 11988, *Floodplain Management* (24 May 1977);
- EO 11990, *Protection of Wetlands* (24 May 1977);
- EO 13175, *Consultation and Coordination with Indian Tribal Governments* (6 November 2000);
- EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (11 February 1994);
- EO 13045, *Protection of Children From Environmental Health Risks and Safety Risks* (21 April 1997), as amended by EO 13296 (23 April 2003);
- EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management* (24 January 2007);
- EO 13514, *Federal Leadership in Environmental, Energy, and Economic Performance* (5 October 2009);
- Section 438 of the EISA (19 December 2007); and
- EPA Act of 2005 (8 August 2005).

## **2. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

### **2.1 Proposed Action**

The Academy proposes to construct and operate an ESC that is compliant with all current Air Force and DoD requirements and guidance. The proposed ESC would include an Emergency Communications Center (i.e., the 911 dispatch center function), ESC Command Center, administrative and training space, investigations, law enforcement, armory, holding cells, mechanical equipment room, storage area, lighted parking, landscaping, and all associated utilities.

The Proposed Action components would encompass approximately 28,711 square feet (sf) and would include a reinforced concrete slab on grade; a reinforced foundation; structural steel framing; exterior window curtain walls with aluminum mullions; all supporting building systems; a modified bitumen roof system; an emergency generator; interior architectural finishes; site preparation; and development to include walkways, landscaping, parking areas with access drives, and integrated force protection solutions. The parking area would contain approximately 200 standard-sized vehicle spaces and would be sited according to AT/FP standards.

#### **2.1.1 Construction and Demolition Activities**

Implementation of the Proposed Action would require general site clearing, grading and building construction. Existing utilities are readily available for extension to the proposed site. The area of construction would require storing of heavy equipment during non-work times. The equipment would consist of excavators, front-end loaders and dump trucks. During construction of the Proposed Action structure, equipment such as cranes would occupy the construction area.

Three existing buildings that are located in the southern portion of the Academy and are currently being used by the SF (Buildings 8020, 8024, and 8028) would be decommissioned and demolished during the proposed action. The total square footage of these facilities is 11,538. The decommissioning and demolition would occur following completion of the ESC construction. Following demolition, the land would be restored to a natural, predevelopment condition.

#### **2.1.2 Operation**

Once operational, the SF, the Fire Department (FD), the 10th Air Base Wing (ABW) Command Post, and the 10th Communication Squadron (CS) would occupy the proposed ESC. These end users would perform the same functions that they are currently performing at various locations on the Academy, including police functions (e.g., general law enforcement, investigations, booking, weapons cleaning and maintenance), 911 services, general administrative functions, and training.

In accordance with U.S. Air Force (USAF) policy, the Academy would apply sustainable development concepts during the planning, design, construction, and operation, and maintenance phases of the proposed ESC. The proposed ESC would be designed, constructed, and operated with the capability of achieving a Leadership in Energy and Environmental Design (LEED) Silver certification.

### **2.2 Alternatives Development**

The NEPA, CEQ regulations, and 32 CFR 989, *Environmental Impact Analysis Process*, require that a range of reasonable alternatives to the Proposed Action be rigorously explored and objectively evaluated. This section presents the criteria for selecting reasonable alternatives for the construction and operation of an ESC at the Academy. The Proposed Action alternatives are identified, summarized, and evaluated

against these criteria. Alternatives that were eliminated from detailed analysis are also identified along with a brief justification for their elimination.

### **2.2.1 Screening Criteria**

As part of early planning, the Academy identified screening criteria for siting the Proposed Action. The Academy identified three primary (required) screening criteria:

- The site must be located outside of the Restricted Area (Cadet Area).
- The site must be strategically located central to the Academy base populace.
- The site must provide adequate space for the various aspects of emergency operations in accordance with Air Force Handbook 32-1084, Facility Requirements.

Additional, secondary screening criteria were also identified during the planning process. Satisfaction of these screening criteria would provide a location best suited to meet the purpose of and need for the Proposed Action that would also minimize environmental impacts:

- The site should be located and designed to avoid fragmentation and imposition on the natural habitat.
- The site should be near existing utilities.
- The site should be near existing emergency functions to allow beneficial sharing of resources and infrastructure.

## **2.3 Evaluated Alternatives**

### **2.3.1 Alternative 1 – Preferred Alternative**

The Alternative 1 site is the Preferred Alternative for the implementation of the Proposed Action. This alternative would site the proposed ESC on an approximately seven acre tract that is bordered to the north by Academy Drive, to the east by Fire Station 2 and the 10th Communications Squadron buildings, and to the west and south by open land (see **Figure 1-2**). The 10<sup>th</sup> Medical Group Clinic is located approximately 1,000 feet southwest of the site. Currently, the Preferred Alternative site is in a natural state composed of grasses, shrubs, and pine trees. The site is generally level. This location satisfies all of the screening criteria identified in **Section 2.2.1**.

A Giant Voice Tower is located near the southern portion of the site. The tower would need to be relocated if it is determined to be in the footprint of the proposed facility or within AT / FP standoff distances.

### **2.3.2 Alternative 2**

The Alternative 2 site is located northwest of the intersection of Academy Drive and Interior Drive (see **Figure 1-2**). The site consists of grasses, shrubs, and pine trees and is mostly flat in topography with a steep drop-off on the north side of the proposed site. This location provides sufficient available open land, is easily accessible from Academy and Interior Drives, and is centrally located within the Academy base populace.



## ESC PROPOSED LOCATIONS

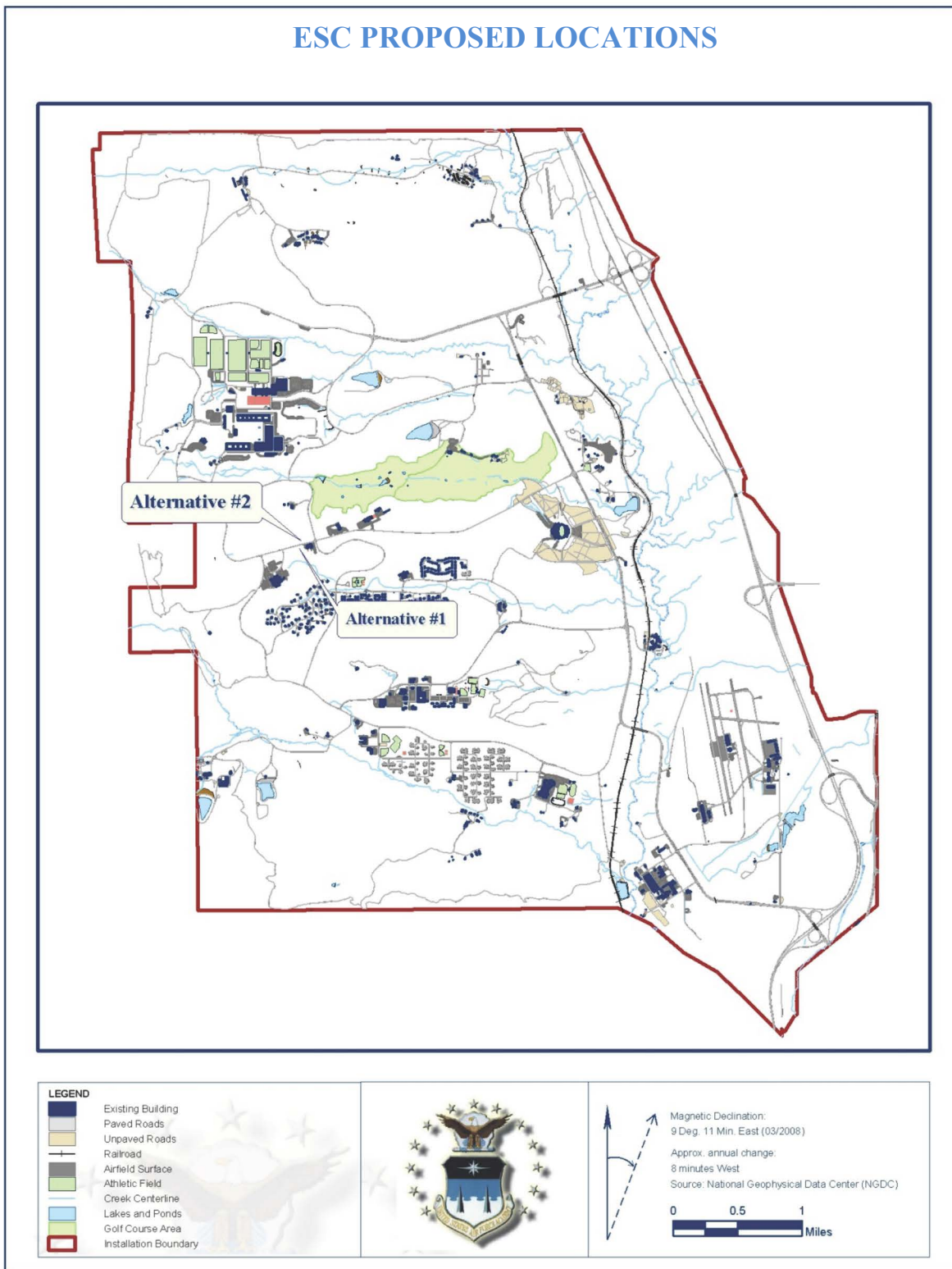


Figure 1-2 Location of Alternative sites for Proposed ESC.

### **2.3.3 Alternative 3 – No Action**

The No Action Alternative would maintain the status quo, and the proposed facilities would not be constructed to accommodate the emergency services as described in **Section 2.0**. Under the No-Action Alternative, the daily operations of the 911 call dispatch center, Security Forces, and Emergency Management would continue to be hindered and work adjustments will remain in effect to accomplish the mission. Productivity, efficiency, effectiveness, and quality of life would continue to be negatively impacted by not having an adequate consolidated facility to meet mission needs or subsequent mission increases. The current facilities would continue to be overcrowded and training functions will continue to be limited.

While the No Action Alternative would not satisfy the purpose of or need for action, this alternative was retained to provide a comparative baseline against which to analyze the effects of the Proposed Action, as required under Federal law.

## **2.4 Alternatives Eliminated from Further Analysis**

The following sites were initially considered but eliminated because they did not meet the screening criteria identified in **Section 2.2.1**.

### **2.4.1 Expand and Renovate the Current Security Forces Facility**

The Air Force considered renovating and expanding the current SF facility (Building 8024). However, this alternative was eliminated from consideration because the site is not centrally located (it is located in the southern portion of the Academy), and the available space was not large enough for the conceptual building footprint without impeding into the 100-year floodplain and potentially impacting habitat for the federally threatened Preble's meadow jumping mouse (PMJM)

### **2.4.2 Locate the ESC North of the Current Security Forces Facility**

The Air Force considered siting the ESC on undeveloped land located immediately north of the current SF facility, but removed the site from consideration because it is not centrally located, and did not provide the proper size and configuration for the proposed building footprint.

## **2.5 Summary of Comparison of Alternatives**

**Table 2-1** provides a summary comparison of the evaluated alternatives (Alternative 1, Alternative 2 and the No Action Alternative) with respect to the environmental resource areas discussed in this EA.

Table 2-1 Summary comparison of alternatives.

<b>Resources</b>	<b>Alternative 1</b>	<b>Alternative 2</b>	<b>No-Action Alternative</b>
Land Use	Insignificant impacts: Land use would change from Natural Open and General Use space to Administration. However, siting immediately adjacent to existing, related structures would minimize fragmentation and loss of high quality habitat.	Insignificant impacts: Land use would change from Natural Open space to Administration. Location adjacent to major road intersection would reduce fragmentation and loss of high quality habitat.	No impacts would occur
Water Resources	Insignificant impacts: BMPs would be required to control source and run-off.	Insignificant impacts: BMPs would be required to control source and run-off.	No impacts would occur
Biological Resources	Insignificant impacts to vegetation and wildlife from construction; potential minor benefit to Threatened and Endangered Species; no impacts to wetlands.	Insignificant impacts to vegetation and wildlife from construction; potential minor benefit to Threatened and Endangered Species; no impacts to wetlands.	No impacts would occur
Air Quality	Minor, temporary, short-term impacts from air emissions from construction activity, insignificant long term impacts due to operational activities from a new emergency generator being installed.	Minor, temporary, short-term impacts from air emissions from construction activity, insignificant long term impacts due to operational activities from a new emergency generator being installed.	No impacts would occur
Cultural Resources	No minor or long-term cumulative impacts.	No minor or long-term cumulative impacts.	No impacts would occur
Hazardous and Toxic Substances	Minor, short-term impacts during construction. Minor, long-term impacts related to solid-waste and use of hazardous materials during operations.	Minor, short-term impacts during construction. Minor, long-term impacts related to solid-waste and use of hazardous materials during operations.	No impacts would occur

### 3. AFFECTED ENVIRONMENT

#### 3.1 Resources Eliminated From Further Analysis

The Academy, as encouraged by the CEQ Regulations, endeavors to keep NEPA analyses as concise and focused as possible. This is in accordance with CEQ Regulations at 40 CFR Part 1500.1(b) and 1500.4(b): "...NEPA documents must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail...prepare analytic rather than encyclopedic analyses."

Resource areas that were eliminated from further analysis for this EA include geologic resources, noise, socioeconomics, and transportation. These resource areas are discussed briefly below. Included for each is the rationale as to why the resource was not retained for further analysis.

- **Geological Resources** – Construction and operations of the Preferred Alternative would not impact geological resources. Site preparation would not disturb geological formations, and operations would be that of a general office facility. This impact would be the same for any alternative.
- **Noise** – The proposed action is in a lightly populated area of the Academy. Site construction would be expected to generate some noise, but no adverse affects are expected due to the location of Proposed Action alternatives.
- **Socioeconomics** – The socioeconomics impacts of the Proposed Action alternatives would be minimal due to the consolidation of existing facilities and operations. No long term new economic opportunities would be created.
- **Transportation** – Overall vehicular traffic on the Academy would not increase, as employees/deliveries would only be traveling to a consolidated facility. The impacts would be the same for both alternatives.

#### 3.2 Resources Retained for Further Analysis

Resources retained for further analysis include those that have the potential to be affected by the Proposed Action. Resources identified for further analysis for this EA are described in **Sections 3.2.1 through 3.2.6**. They include: *land use, water resources, biological resources, air quality, cultural resources, and hazardous materials*.

##### 3.2.1 Land Use

###### 3.2.1.1 Land Use Plans and Policies

The Academy General Plan (USAFA 2005) has been developed to guide future development and land use decisions. The land use component of the General Plan identifies and analyzes functional relationships of organizational units and activities assigned to the Academy, and supports existing and future mission requirements by allocating or reserving land necessary to support current and future operations. The General Plan identifies four general environmental objectives that should consistently be pursued at the Academy:

*Conservation*—Preserve and protect the physical and visual presence of the natural setting. Protect irreplaceable open space and the existing architectural character.

*Continuity*—Ensure functional harmony between new and existing development and the natural surroundings.

*Compatibility*—Ensure visual harmony between new and existing development and the natural surroundings.

*Clustering*—Ensure proposed development either replaces unnecessary or obsolete buildings or is adjacent to existing development in an effort to preserve environmental resources.

### **3.2.1.2 Current Land Use**

Existing land use on the Academy includes approximately 1,109 developed acres spread throughout the installation. The remaining 17,406 acres are composed of a variety of uses that include recreational, training, and conservation. The Preferred Alternative site is vacant and previously undisturbed, has a substantial amount of brush and pine trees, and does not lie within a restricted area. Approximately 80% of the site is designated as Natural Open Space, and the remainder is designated General Open Space (**Figure 3-1**). The Alternative 2 site is designated entirely as Natural Open Space. Approximately 64% (11,886 acres) of the Academy is designated Natural Open Space, and approximately three percent (500 acres) is designated General Open Space. The General Plan describes these designations as follows:

**Natural Open Space:** This land use pertains to non-recreation land that does not contain buildings or other built improvements. Conservation areas, required buffer space, and utility easements are included. This land is not appropriate for building or recreational open space for a variety of reasons, including steep slopes, animal habitats, water bodies, streams, floodplain, or adjacency to a National Forest. It is imperative that the remaining natural open areas not be considered a land bank for development.

**General Open Space:** General open space consists of land which surrounds and buffers adjoin roads, parking and building development and should remain free of scattered structures. It is considered a land resource for unforeseen new development or the growth of adjoining existing development.

### **3.2.1.3 Future Land Use**

The General Plan includes a future Land Use Plan for the Academy. Identifying land suitable for future development entails mapping all development constraints in a comprehensive fashion. To facilitate the Academy-wide use of land in a manner supportive of general environmental objectives, the 1988 USAF Land Use Plan (as described in the General Plan) suggested the following policies and strategies that are applicable to the Proposed Action:

- Accommodate any foreseeable development within the present Academy land holdings.
- Accommodate all expected growth and change to the base and its facilities within the defined sub-areas. The sub-areas are broad in functional definition and contain land area to accommodate all foreseen Academy additions.
- Maintain development edge boundaries for all sub-areas and specific function areas. “Creeping” development and ad hoc growth should be curtailed. The original concept of concentrated and controlled development, within a predominantly natural environment, should be maintained. Development should not occur outside specified area boundaries.
- Prohibit scattered facility construction. Since the completion of the Academy, a series of small-scale structures used for storage, maintenance, office, housing and community needs have developed around the base (i.e. Contractor Storage Area). All functions that occur in these scattered structures can and should be accommodated within specified area boundaries.



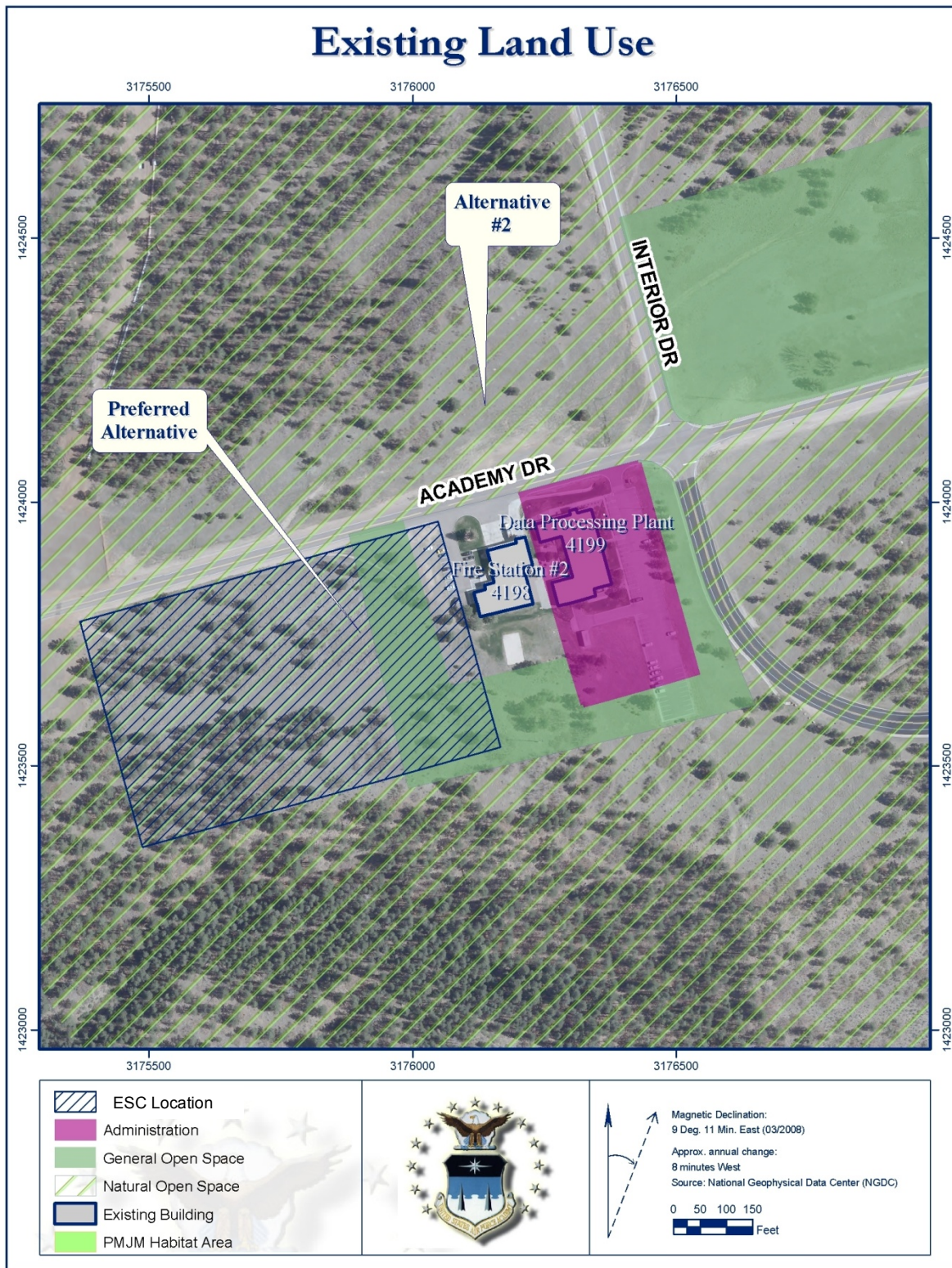


Figure 3-1. Current land use designations in the vicinity of the alternative site locations.

- Academy buffer areas on all boundaries should be free from any structures, leaving natural open space between the Academy and adjacent development. This would protect the Academy's natural setting and assure functional and visual harmony between the Academy and surrounding development.
- Maintain scrutiny and control of easements on Academy property.

With the above strategies and policies in mind, the future Land Use Plan for the Academy was created. The future land use plan continues to designate both alternative sites as Natural Open Space and General Open Space as described above in **Section 3.2.1.2**. The future Land Use Plan designates 72% (13,247 acres) of the Academy as Natural Open Space, and less than two percent (300 acres) as General Open Space.

### **3.2.2 Water Resources**

#### **3.2.2.1 Surface Water**

Surface water drainages are among the most important natural resource features on the Academy. They represent areas of concentrated biodiversity, and various wildlife habitat values overlap in these areas. The predominant surface water feature on the base is Monument Creek, which runs from north to south on the east side of the Academy. The headwaters of Monument Creek originate from springs in the Rampart Range north and west of the Academy. The Academy has preserved Monument Creek, and it represents one of the natural remaining plains streams in the upper Arkansas River drainage. Monument Creek serves as a refuge for several species of rare plants and for the Preble's meadow jumping mouse (INRMP 2008).

The major surface water feature near the Preferred and Alternative 2 sites is Lehman Run, located over a thousand feet to the north. This stream traverses from the Rampart Reservoir west of the Academy to the southeast where it joins with Monument Creek near the southern border of the Academy. Monument Creek and its tributaries are a part of the larger Fountain Creek Watershed, which drains into the Arkansas River.

On the western border of the Academy, West Monument Creek flows through the McCulloch Water Treatment Plant, which is owned by the City of Colorado Springs. Stream flows are partially regulated by this facility. Riparian quality is relatively good, but management concerns include degree and frequency of fluctuation in water flows and the potential for increased sediment input to the stream.

Currently, stormwater from the two alternative sites is either absorbed into the ground or it surface flows south to West Monument Creek.

There are no springs located in the proposed project area.

#### **3.2.2.2 Floodplains**

Floodplains are defined by Executive Order 11988 (Flood Plain Management), as lowland and relatively flat areas adjoining inland and coastal water that would be inundated by a 100-year flood. The proposed action is outside of the 100-year floodplain (INRMP 2008) (**Figure 3-2**).

#### **3.2.2.3 Groundwater**

The alternative sites are associated with the western edge of the Denver aquifer, which composes part of the larger Denver underground water basin. This basin is formed of several layers of aquifers that are

each separated by a confining layer. The water present in these aquifers was deposited millions of years ago when the basin was formed. Due to lack of connectivity between aquifers and to surface water (infiltration or recharge of aquifer from surface water), groundwater present in the aquifers is not considered renewable.

### **3.2.3 Biological Resources**

#### **3.2.3.1 Vegetation**

The Academy's Integrated Natural Resources Management Plan (INRMP 2008) describes the Academy's vegetation resources as significant because they encompass the elevation-related gradient from prairie grasslands to montane forests. The mosaic, or the pattern that the different plant communities create in relationship to one another, is a critical aspect of the biodiversity found at the Academy. Because the foothills are prime development areas along the Front Range, relatively intact foothills vegetation communities are declining in number and area. The Academy, along with Roxborough Park (about 50 miles to the north), represents some of the last remaining relatively "untouched" mature ponderosa pine and scrub oak habitat type on the Front Range. Fire is a known disturbance mechanism affecting the health and distribution of these vegetation communities.

The major compositional trend of the vegetation over time is toward an increased density of conifers, especially in the montane zone. Forests that were originally open woodlands are now dense forests; and where vegetation was originally grassland, there are young populations of ponderosa pine. This trend is dramatic in many cases and is part of a widespread pattern throughout the west. Three factors that have contributed to this are a shift toward a more mesic climate, overgrazing by livestock, and fire suppression. There are many types of vegetative cover on the base driven by local site differences and hydrology, soils, topography, elevation, and aspect.

Diffuse knapweed and yellow toadflax, both state-listed noxious weeds, are widespread and abundant on the base. Other common herbaceous plants include hairy aster, sand dropseed, western wheatgrass, smooth brome, mountain muhly, cheatgrass, mullen, coyote willow, ragweed, annual sunflower, and an assortment of early successional forbs (INRMP 2008).

The vegetation in the area of the proposed development is composed of scattered pines, with an understory of shrubs and perennial grasses and forbs.

#### **3.2.3.2 Wildlife**

Because of habitat diversity and preservation, more native wildlife species exist on the Academy than would be expected in an area of equivalent size and proximity to an urban center. For example, 247 (55%) of the 444 bird species found in Colorado occur at the Academy, and about 70 (56%) of the 125 mammal species known to occur in Colorado are found on the installation.

Factors contributing to the high biodiversity on the Academy are the topographic variation, the location at the convergence of north-south and plains-mountains transition zones, the presence of high quality riparian habitat, and the adjacency to the undeveloped forested expanses of the Pike National Forest. The large percentage of undeveloped natural areas on the Academy and the numerous vegetation types and their resulting mosaic, or pattern, provide a high degree of connectivity between habitat types and maintain essential migration routes for deer, elk, black bear, mountain lion, wild turkey, and other animals.



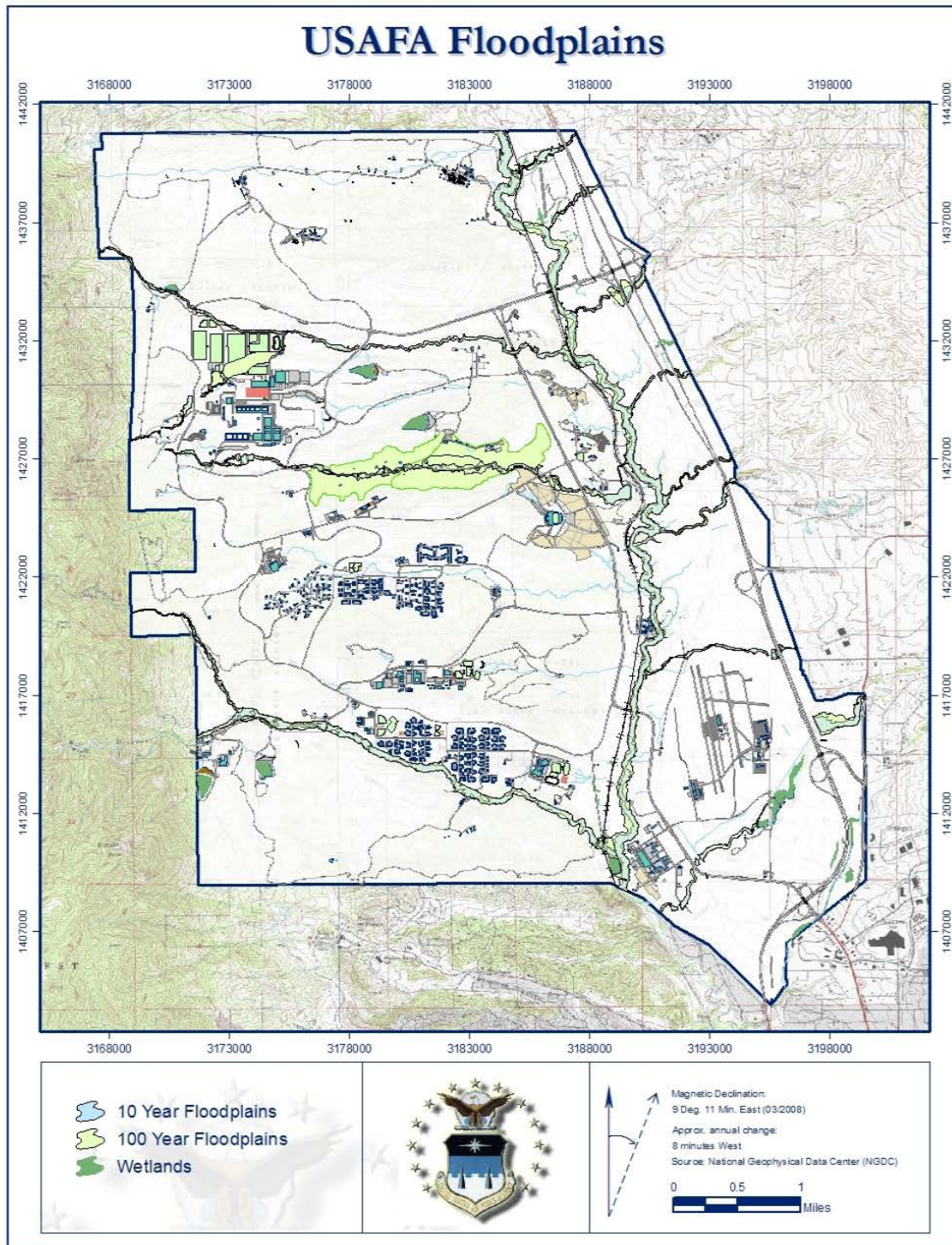


Figure 3-2 Wetland and floodplain features on the Academy.

Monument Creek and its tributaries are important riparian habitats. These areas provide high quality habitat for wildlife, especially white-tailed deer, the federally threatened PMJM, amphibians, and neotropical migratory birds. The highest diversity of species occurs in the riparian and shrub communities. Mature ponderosa pine stands with grass understory provide habitat for Abert's squirrel. Ridges and valleys that run west to east across the base are important travel corridors for wildlife. Most south-facing slopes are important feeding and warming areas for deer and elk. The north slopes of some ridges are used as bedding and thermal cover areas. Elk are most commonly observed in the northern half of the installation.

The Academy is home to mountain lions and black bears. Bears have become an increasing nuisance in housing areas and at other facilities. Mountain lion sightings have been infrequent, and no human-lion encounters have resulted in injury.

Additional animals that could be present in the project area include mule and white-tailed deer, black bear, mountain lion, small-footed bat, least chipmunk, several mouse species, cottontail rabbit, red fox, Gunnison's prairie dog, spotted ground squirrel, plains pocket gopher, western harvest mouse, and coyote. Common birds are wild turkey, broad-tailed hummingbird, Williamson's sapsucker, red-tailed hawk, prairie falcon, scrub jay, rufus-sided towhee and pygmy nuthatch. The shorthorned lizard, bullsnake, and western rattlesnake also occur in these areas (INRMP 2008).

### **3.2.3.3 Threatened and Endangered Species**

Threatened and endangered species are federally protected plants and animals that are in danger of becoming extinct. Such species are threatened or endangered for a variety of reasons, mainly due to specialized habitat needs or habitat destruction. Any adverse impact on the habitat of a listed species is strictly prohibited.

The West Monument Creek to the south is considered a conservation area because it was identified as being of very high significance for biodiversity that contains habitat for the following significant species: PMJM, hops azure butterfly, southern Rocky Mountain cinquefoil, New Mexico cliff fern, cedar waxwing, gray catbird, and northern leopard frog. To the west of the project area is the Stanley Canyon Conservation Site. This site spans the transition from montane canyon to foothills stream. It supports several bird and butterfly species that are rare within Colorado, including ovenbird, evening grosbeak, Snow's skipper butterfly, and Morrison skipper butterfly (INRMP 2008). These species of special concern are known to be in the vicinity of the proposed action but none are known to occur at the alternate locations.

The Federally listed threatened PMJM is the only species occurring on the Academy that is protected by the ESA. The Academy is known to support one of the largest and most stable populations of Preble's mice throughout its range. Preble's are most often found in dense, herbaceous riparian vegetation and closely adjacent uplands. Suitable habitat on the Academy is generally defined as falling within 300 feet of the 100-year floodplain. The nearest identified suitable habitat for PMJM is adjacent to West Monument Creek PMJM. This habitat is located approximately 1.5 miles north-northwest of the preferred and alternative sites.

### **3.2.3.4 Wetlands**

National Wetlands Inventory maps exist of the Academy, however these maps are incomplete, out of date, and have not been subjected to extensive investigation. The Academy commissioned a study resulting in the delineation of non-jurisdictional wetlands in 2002. The study indicated that there are no wetlands in the vicinity of the preferred or alternative sites (**Figure 3-2**).



### 3.2.4 Air Quality

For analysis purposes, the Region of influence (ROI) for air quality is defined as El Paso County, Colorado where the proposed project site is located. The proposed site is located in the EPA Region 8.

The ambient air quality in an area can be characterized in terms of whether it complies with the primary and secondary National Ambient Air Quality Standards (NAAQS). The Clean Air Act (42 U.S.C. 7401 et seq.) requires the U.S. Environmental Protection Agency (EPA) to set NAAQS for pollutants considered harmful to public health and the environment. NAAQS have been established for seven criteria pollutants: carbon monoxide (CO); lead (Pb); nitrogen dioxide (NO<sub>2</sub>); ozone (O<sub>3</sub>); particulate matter with an aerodynamic size less than or equal to 10 microns (PM<sub>10</sub>); particulate matter with an aerodynamic size less than or equal to 2.5 microns (PM<sub>2.5</sub>); and sulfur dioxide (SO<sub>2</sub>). These pollutants are believed to be detrimental to public health and the environment, and are known to cause property damage. Table 4-1 lists the NAAQS values for each criteria pollutant.

The Colorado Air Quality Control Commission, The Colorado Department of Public Health and Environment (CDPHE) and the Pikes Peak Area Council of Governments (PPACOG) work to ensure that the air quality within Colorado meets or is better than the levels required by Federal and State standards. Colorado has a State Implementation Plan (SIP) for the management and regulation of air pollution. The Academy is within the Colorado Springs ROI. The region is under a CO Maintenance Plan until 2020 to demonstrate compliance with the CO NAAQS.

Table 3-2. National Ambient Air Quality Standards.

Pollutant	National	Colorado
<b>Carbon Monoxide (CO)</b>		
8-hour average	9 ppm	10 mg/m <sup>3</sup>
1-hour average	35 ppm	40 mg/m <sup>3</sup>
<b>Lead (Pb)</b>		
Quarterly Average	1.5 µg/m <sup>3</sup>	
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>		
Annual arithmetic mean	0.053 ppm	100 µg/m <sup>3</sup>

Table 3-2. (continued).

Pollutant	National	Colorado
<b>Ozone (O<sub>3</sub>)</b>		
8-hour average	0.075 ppm	235 µg/m <sup>3</sup> (1 hour)
<b>Particulate matter less than 10 microns (PM<sub>10</sub>)</b>		
Annual Mean	50 µg/m <sup>3</sup>	50 µg/m <sup>3</sup>
24-hour average	150 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>
<b>Particulate matter less than 2.5 microns (PM<sub>2.5</sub>)</b>		
Annual arithmetic mean	15.0 µg/m <sup>3</sup>	
24-hour average	35 µg/m <sup>3</sup>	
<b>Sulfur dioxide (SO<sub>2</sub>)</b>		
Annual arithmetic mean	0.03 ppm	Annual arithmetic mean
24-hour average	0.14 ppm	24-hour average

Source: 40 CFR 50.4 through 50.13  
 µg/m<sup>3</sup> = micrograms per cubic meter  
 ppm = parts per million

### **3.2.4.1 Regional Air Pollution Emissions Summary**

General air quality monitoring is conducted in areas of high population density and near major sources of air pollutant emissions. Rural areas are typically not considered in such monitoring. Regions that are in compliance with the NAAQS are designated as attainment areas. Areas for which no monitoring data is available are designated as unclassified and are by default considered to be in attainment of the NAAQS. In areas where the applicable NAAQS are not being met, a non-attainment status is designated. Both the Preferred Alternative and Alternative 2 are located in EPA Region 8. These sites are currently in an attainment area and the Colorado Springs ROI.

To regulate the emission levels resulting from a project, federal actions located in non-attainment areas are required to demonstrate compliance with the general conformity guidelines established in 40 CFR Part 93, Determining Conformity of Federal Actions to State or Federal Implementation Plans (the Rule). Section 93.153 of the Rule sets the applicability requirements for projects subject to the Rule through the establishment of *de minimis* levels for annual criteria pollutant emissions. These *de minimis* levels are set according to criteria pollutant nonattainment area designations. Projects below the *de minimis* levels are not subject to the Rule. Those at or above the levels are required to perform a conformity analysis as established in the Rule. The *de minimis* levels apply to direct and indirect sources of emissions that can occur during the construction and operational phases of the action.

In addition to evaluation of air emissions against *de minimis* levels, emissions are also evaluated for regional significance. A federal action that does not exceed the threshold emission rates of criteria pollutants may still be subject to a general conformity determination if the direct and indirect emissions from the action exceed 10 percent of the total emissions inventory for a particular criteria pollutant in a non-attainment or maintenance area. If the emissions exceed this 10 percent threshold, the federal action is considered to be a “regionally significant” activity, and thus, the general conformity rules apply.

### **3.2.5 Cultural Resources**

Cultural resources are any prehistoric or historic district, site, building, structure, or object considered important to a culture, subculture, or community for scientific, traditional, religious or other purposes. They include archaeological resources, historic architectural resources, and traditional resources. Archaeological resources are locations where prehistoric or historic activity measurably altered the earth or produced deposits of physical remains (e.g., arrowheads, bottles). Historic architectural resources include standing buildings, dams, canals, bridges, and other structures of historic or aesthetic significance. Traditional resources are associated with cultural practices and beliefs of a living community that are rooted in its history, and are important in maintaining the continuing cultural identity of the community.

Historic properties (as defined in 36 CFR 60.4) are significant archaeological, architectural, or traditional resources that are either eligible for listing, or listed in the NRHP. Historic properties are evaluated for potential adverse impacts from an action, as are significant traditional resources identified by American Indian tribes or other groups.

One of the major components of the Academy Design Standards is the potential impact a building may have on the view sheds that have been established since the Academy’s inception.

### **3.2.6 Hazardous Materials**

Hazardous materials and hazardous wastes, if mishandled, can pose risks to the public through exposure. Potential health and safety impacts can stem from interactions of construction workers, the public and/or future residents/workers with hazardous materials and wastes encountered or generated during project construction activities or project operations.

In qualitative terms, an increase in the level of risk would correlate with an increase in the nature and relative quantities of hazardous materials and wastes handled and/or stored at the Academy, and from potential exposure of workers to hazardous materials associated with construction.

The most common threat of hazardous materials at the Academy is the release of petroleum, oils and lubricants (POLs) due to spills or leaks from aircraft, vehicles or generators. The Academy implements a Hazardous Materials Emergency Planning and Response Plan that describes preventative actions that should be taken to reduce the potential for hazardous materials from entering the environment and provides guidance concerning the containment and cleanup of spills. The Academy also has a Hazmat Management System for distributing hazardous materials and an Installation Hazmat Management Process (IHMP) Team for use at industrial shops on base (INRMP, 2008).

## **4. ENVIRONMENTAL CONSEQUENCES**

### **4.1 Land Use**

Potential impacts to land use from the proposed action were determined by evaluating whether the action is compatible with existing land use and in conformance with existing land use plans and policies. Potential land use impacts were analyzed by: 1) identifying and describing land uses that could affect or be affected by the Proposed Action, 2) assessing the degree to which construction and/or operation of facilities would interfere with the activities or functions of adjacent existing land uses; and, 3) determining whether interference with adjacent land use would be incompatible to the point that public health or safety would be threatened.

#### **4.1.1 Preferred Alternative**

As described in **Section 3.2.1**, the 2005 General Plan identifies the current future land use for the Preferred Alternative site as Natural Open Space and General Open Space. The General Open Space category includes those areas that surround and buffer existing roads, parking, and buildings. It can be used for new development or expansion of existing facilities provided the development location is thoroughly studied and open space remains free of scattered structures. (General Plan 2005). The proposed ESC would be used for consolidating emergency services into a single building and would increase operational efficiency in terms of response and command and control.

Although Natural Open Space is generally considered “not appropriate for building or recreational open space for a variety of reasons, including steep slopes, animal habitats, water bodies, streams, floodplain, or adjacency to a National Forest” the Preferred Alternative site does not possess high quality characteristics of any of the noted characteristics (although it does provide animal habitat, the habitat type present is very common on the Academy). Additionally, the Preferred Alternative site would impact only 0.1% of the total amount of Natural Open Space designated in the General Plan, and would not result in habitat fragmentation because it is adjacent to a major road (Academy Drive) and existing emergency related facilities (i.e., the Fire Station and Communications Squadron).

Because implementation of the Proposed Action at the Preferred Alternative site would occur immediately adjacent to existing, related structures rather than causing fragmentation of Natural Open Space, impacts to land use would be insignificant.

#### **4.1.2 Alternative 2**

Impacts associated with implementation of Alternative 2 would be similar to those described for the Preferred Alternative in **Section 4.1.1**, however, the entire tract is designated as Natural Open Space, and is not directly adjacent to existing facilities (the Fire Station and Communications Squadron buildings are across Academy Drive from the Alternative 2 site). However, because the Alternative 2 site would impact such a small area and would minimize fragmentation due to its location at a road intersection, impacts to land use from implementing the Proposed Action at this site would be insignificant.

#### **4.1.3 No Action Alternative**

Land use on the Academy would not change from the existing condition as a result of implementation of the No Action Alternative.

#### **4.1.4 Mitigation**

Land use mitigation is not required for the Preferred Alternative.

#### **4.1.5 Cumulative and Long-Term Impacts**

Any future construction projects planned for the Academy would be consistent with the policies and strategies identified in the General Plan. Although development in Natural Open Space is inconsistent with the General Plan, the Preferred Alternative site does minimize habitat fragmentation, as it is situated between three existing, related facilities (i.e., the Fire Department and Communications Squadron to the east, and the Medical Center to the southwest). The future Land Use Plan includes an expansion of the Medical Center north to Academy Drive. This expansion would decrease the distance between the Proposed ESC and the Medical Center. No other changes in the surrounding land use are included in the future Land Use Plan, therefore cumulative and long-term impacts to nearby land uses would be insignificant.

### **4.2 Water Resources**

Water resources include all surface waters and groundwater. For the purposes of this analysis, those water resources within the proposed project area, and the watershed areas affected by existing and potential surface water runoff, were analyzed. Floodplains and wetlands (jurisdictional and non-jurisdictional) were also considered during the analysis.

The criteria for determining the significance of impacts to Water Resources are based on water quantity, quality, and use; whether they occur within a 100-year floodplain or wetland, consume or add to surface water or groundwater resources, alter surface water flow patterns that could affect stormwater runoff, or alter releases of pollutants to water, or land (surface water drainages) that would affect the hydrologic system.

The Academy complies with EISA 438, as regulated, and would opt to conduct a site-specific hydrologic analysis to determine predevelopment stormwater flow and retention characteristics. The analysis would provide a baseline of hydrologic conditions that would be considered the standard the proposed development must meet. The development would then have to include infrastructure designed to manage stormwater conditions to achieve site specific flow rates, volumes, duration and temperature established as baseline predevelopment conditions as part of the hydrologic analysis.

An increase in impermeable surfaces would result from facility construction and stormwater controls (e.g., retention/detention basins, infiltration basin, stormwater velocity dissipating devices, and landscaping features) would be designed to address any resulting increase in stormwater velocities and volumes. The Academy would conduct a hydrologic assessment prior to construction activities in order to appropriately design the location and placement of stormwater controls, and determine location and size of basins that would maintain predevelopment hydrology and prevent any net increase in stormwater runoff.

#### **4.2.1 Preferred Alternative**

**Construction Stormwater Quality:** Grading and construction of the preferred alternative would result in temporary soil disturbance that would be controlled with stormwater best management practices (BMPs) implemented to comply with the applicable construction stormwater regulations and permit requirements. Construction stormwater permit requirements would require the construction contractor to:

- Sequence construction to minimize disturbed areas and to minimize soil erosion.
- Install and maintain appropriate Best Management Practices (BMPs) to minimize erosion and prevent sediment from leaving the site.

- Protect storm drain inlets to prevent sediment from entering storm drains.
- Immediately clean up spills of fuels, lubricants, and other HAZMAT in accordance with the Hazardous Materials Spill Management Plan.
- Conduct site inspections every 14 days or after precipitation events of 0.5 inches or more to ensure sediment is not leaving the site.
- Document inspections on a form developed by the Contractor.
- Ensure that flows from this site and future anticipated development do not exceed the capacity of storm collection and retention devices on base through possible design of a detention pond of proper sizing to meet historic discharge rates to limit downstream impacts.

The proposed construction would likely contribute to additional storm water runoff volume due to an increased impervious area from the anticipated increase in parking spaces, pedestrian walkways and plazas, and roof. Design criteria and operational practices should take this increase into account. Because of the steep slopes, there is a potential for erosion to occur as a result of construction activities.

Strict adherence to these requirements would keep construction impacts to water resources to a minimum.

**Post-Construction Stormwater Quality:** Operation of the facility after construction would not significantly increase pollutant loads since the facility is an office building with minimal industrial, materials handling, or other pollutant generating activities. In addition, the Academy is considered a small municipal separate storm sewer system (MS4) subject to EPA regulations at 40 CFR 122. These regulations require the Academy to develop and implement a Stormwater Management Program (SWMP) to address stormwater runoff quality from new development and significant redevelopment. This program would continue to be implemented. Through education of students, staff, and visitors and along with the implementation of drainage design practices defined in facility design criteria and manuals, pollutant discharges would be reduced to the maximum extent practicable using post-construction BMPs (operations and maintenance, surface cleaning, sweeping, swales, infiltration, source control, etc.). As a result of these design and operational practices, post-construction impacts to water resources are anticipated to be minimal.

**Stormwater Runoff Volume:** Implementation of the Preferred Alternative would convert some undeveloped land west of Fire Station Bldg. 4198 to impervious surfaces (approximately 120,000 sq. ft. including paving, sidewalks, and roof areas). This conversion, without proper BMPs, would increase post-development runoff flows. These increased flows, however, would be minimized by the designer and architect by the use of Low Impact Development (LID) practices in accord with EPA's *Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects Under Section 438 of the Energy Independence and Security Act (EPA 841-B-09-001)*. Adherence to this guidance is required for all federal facilities with a footprint that exceeds 5,000 sq. ft.

Management of the quality and quantity of storm water runoff from the site is being evaluated and a system designed to capitalize on volume reduction and source control through the use of BMPs would be implemented. In addition, post-construction stormwater runoff control designs shall be consistent with criteria presented in the Colorado Springs City / County Storm Water Drainage Control Manual Volumes I and II, which requires control of runoff to historical rates of release from the 2, 5, 10, 50, and 100-year storms.

**Wetlands and Floodplains:** No wetlands or floodplains are in the immediate vicinity of the proposed project area. Therefore, the Preferred Alternative would not be expected to result in significant effects on wetlands or floodplains. Mitigation is required to control erosion, including implementation of a construction storm water permit.

#### **4.2.2 Alternative 2**

Impacts to Water Resources at Alternative Site 2 would be similar to those described for the Preferred Alternative in **Section 4.2.1**.

#### **4.2.3 No Action Alternative**

The No Action alternative would not result in any construction activities at the Academy. No changes to groundwater or surface water would occur.

#### **4.2.4 Mitigation**

Storm water management is mandatory for both construction and post-construction/operation phases of the project under the CWA and the EISA. With the proper development and implementation of BMPs as described in the Preferred Alternative, minimal impacts to water resources would be expected.

#### **4.2.5 Cumulative and Long-Term Impacts**

The cumulative impacts of continued development in the past at the Academy have been the degradation of several stream corridors. A number of factors have contributed to this. Erosion and sedimentation during construction, increased stormwater volume, increased stormwater peak flows, and sequential frequency of stormwater events have all contributed to stream deterioration. Soils at the Academy generally consist of decomposed granite that exhibits low water and moisture holding capacity. During precipitation events, storm water is absorbed by these highly permeable soils, but once saturation occurs or the run-off velocity is excessive, erosion of the soils occurs rapidly.

Efforts to control stormwater on the Academy have focused on maintaining pre-development historic rates of release from the project site. This method of control minimizes stream degradation from stormwater volume, erosion and sediment deposition. Storm water management would be conducted during both the construction and operation of the Preferred Alternative.

Future projects in the vicinity of the Preferred Alternative would utilize source control to minimize downstream impacts. The objective of source control is to imitate the existing hydrologic conditions and in so doing preserve the existing water balance to minimize downstream impacts. With site-specific implementation of BMPs such as source control, future actions would not be expected to cumulatively contribute to impacts on water resources.

### **4.3 Biological Resources**

Biological resources refer to native, naturalized, or introduced plants and animals and the habitats in which they occur. Effects on biological resources would be considered significant if the action: substantially diminished habitat for a plant or animal species; resulted in an impact to threatened or endangered species; substantially diminished a regionally or locally important plant or animal species; interfered substantially with wildlife movement or reproductive behavior; resulted in a substantial infusion of exotic plant or animal species; or, destroy, lose or degrade jurisdictional wetlands or floodplains.

#### **4.3.1 Preferred Alternative**

Overall, potential impacts to biological resources from the Preferred Alternative would not be significant. The Preferred Alternative would have minimal effect on biodiversity or regional plant and animal populations.

Construction and operation of the proposed new facility would disturb approximately three acres of ground. BMPs for erosion control, topsoil management, and revegetation would be required and stated in the construction contract, and therefore potential effects would not be significant. The new facility would be built on land that is native and undisturbed. The area is not identified as habitat for any listed, threatened or endangered animal or plant species. Potential impacts to the animal habitat and vegetation would be temporary as they would most likely move to adjacent undisturbed land surrounding the Preferred Alternative and overall not be significant. Any potential transient species that may enter the site would move to other similar habitat within the area also.

The post-demolition habitat restoration in the vicinity of Buildings 8020, 8024, and 8028 would increase riparian wildlife habitat. Importantly, the land is within the corridor that is considered potential habitat for the PMJM.

#### **4.3.2 Alternative 2**

Impacts to wildlife and vegetation anticipated from Alternative 2 would be similar to those discussed under the Preferred Alternative.

#### **4.3.3 No Action Alternative**

Under the No Action Alternative, no changes or impacts would occur to biological resources.

#### **4.3.4 Mitigation**

Mitigation measures would not be required for the biological resource.

#### **4.3.5 Cumulative and Long-Term Impacts**

The cumulative impacts to biological resources consist of the irreversible changes to the ecosystem on and surrounding the project area. Implementation of the Proposed Action would result in the conversion of Natural Open Space to buildings. However, due to the small size of the project area, and the fact the Proposed Action would result in minimal habitat fragmentation (i.e., similar to the Fire Station, Communications Squadron facility, or Medical Center), cumulative impacts to biological resources from the Proposed Action would be insignificant. The proposed demolition site would be restored to a natural state. This would offset some of the habitat loss at the Preferred Alternative site by increasing important wildlife habitat adjacent to a riparian corridor in the southern portion of the Academy.

### **4.4 Cultural Resources**

Activities at the Academy, such as new construction and/or changes in mission, must consider the impact on the Academy's cultural landscape as well. Changes at the Academy, either new buildings or mission changes, should be compatible with and must respect the existing cultural landscape, an important component of its National Historic Landmark designation. Structural additions that do not follow the original Academy design concepts would destroy the historic integrity of the Academy, which includes the cultural landscape.



#### **4.4.1 Preferred Alternative**

The Preferred Alternative is not part of the National Historic District. According to the 2006 Integrated Cultural Resources Management Plan (ICRMP), there are no previously recorded prehistoric or early historic archeological sites or homesteads within the Preferred Alternative and Alternative 2 site locations. The 2005 Academy General Plan does, however, state that there are several (not identified) archeological sites within the boundary of the Academy. No archeological sites are located within the Preferred Alternative siting location.

No impacts to archaeological or traditional resources would result from implementation of the Preferred Alternative. If archeological resources were inadvertently discovered during demolition, all work would halt at that location and proceed as outlined in the Standard Operating Procedures identified in the USAFA 2006 ICRMP.

#### **4.4.2 Alternative 2**

No impacts to archaeological or traditional resources are likely under Alternative 2. If archeological resources are inadvertently discovered during demolition, all work would halt at that location and proceed as outlined in the Standard Operating Procedures identified in the USAFA 2006 ICRMP.

#### **4.4.3 No Action Alternative**

Under the No Action alternative, no facilities would be constructed and the ESC would operate at its current status. No impacts to cultural resources would result from implementation of the No Action Alternative. Resources would continue to be managed in compliance with federal law and Air Force regulation. The No Action alternative represents status quo conditions and would not represent any change from the existing environment.

#### **4.4.4 Mitigation**

No mitigation is needed during construction of the Preferred Alternative in regards to cultural resources.

#### **4.4.5 Cumulative and Long-Term Impacts**

Cumulative and long-term impacts to cultural resources would not occur with the implementation of the Preferred Alternative.

### **4.5 Air Quality**

Potential impacts to air quality are considered significant if the Proposed Action would: increase ambient air pollution above any NAAQS; contribute to an existing violation of any NAAQS; interfere with or delay timely attainment of NAAQS; or impair visibility within any federally mandated Prevention of Significant Deterioration (PSD) Class I area.

#### **4.5.1 Preferred Alternative**

Temporary increases in air pollution would occur from the use of construction equipment in building new facilities. Dust, diesel emissions, and particulate matter are expected to temporarily increase during the first 12 to 18 months of the project. Due to the short duration of the construction project, any increases or impacts on ambient air quality are expected to be short-term and minor.

Calculations were performed to estimate the total air emissions from the new construction activities. Calculations were made for standard construction equipment such as bulldozers, excavators, front end loaders, backhoes, cranes, and dump trucks. Assumptions were made regarding the type of equipment,

duration of the total number of days each piece of equipment would be used, and the number of hours per day each piece of equipment would be used.

The total air quality emissions, as presented in Table 3-2, were calculated to determine the applicability of the General Conformity Rule. The General Conformity Rule applies to areas that have been designated as a non-attainment or maintenance zone for an air pollutant, such as the Colorado Springs area. Regulations set forth in 40 CFR 51 Subpart W-Determining Conformity of the General Federal Action to State or Federal Implementation Plans determine if additional permits are needed. According to 40 CFR 51.853(b), Federal actions require a Conformity Determination for each pollutant where the total of direct and indirect emissions in a non-attainment or maintenance area caused by a Federal action would equal or exceed any of the rates in paragraphs 40 CFR 51.853(b)(1) or (2). A summary of the total emissions is presented in Table 3-1. As can be seen from this table, the proposed construction activities do not exceed thresholds and, thus, do not require a Conformity Determination.

Emergency generators would be installed and utilized in conjunction with the Proposed Action. These emergency generators would be managed in compliance with the Academy's Air Quality Program. Long-term impacts associated with operation of the proposed new facility are not likely to occur. No fueling facilities, underground storage tanks (USTs), or paint booths would be required for the new facility. The vehicles associated with the use of these facilities are already commuting to other locations on the Academy. Therefore, no significant impact would occur.

#### **4.5.2 Alternative 2**

Impacts anticipated from Alternative 2 would be similar to those discussed under the Preferred Alternative.

#### **4.5.3 No Action Alternative**

Implementation of the No Action Alternative would not change current conditions and, therefore, would not affect the current air quality conditions in the ROI.

#### **4.5.4 Mitigation**

No mitigation is required under the No Action Alternative.

#### **4.5.5 Cumulative and Long-Term Impacts**

As mentioned previously, emissions associated with construction activities for the Preferred Alternative would be insignificant and well below *de minimis* levels. Construction, renovation, or demolition may cause increased short-term external combustion in air emissions from heavy equipment usage. These impacts would be temporary impacts and would not be significant. Proper and routine maintenance of vehicles and other equipment would be implemented to ensure that emissions are within the design standards of all construction equipment.

### **4.6 Hazardous Materials**

For purposes of this document, hazardous materials/solid waste impacts would be considered significant if the Preferred Alternative involves the use, production, or disposal of materials in a manner that poses a hazard to people, animal or plant populations in the area affected. A significant impact would also occur if the action were to present an undue potential risk for health or safety-related accidents.

#### **4.6.1 Preferred Alternative**

The proposed facility would consist of offices, restrooms, training, and armory storage and electronics areas. There would be minimal use of hazardous materials, such as janitorial products and printing supplies during operations; however, it would be a minor increase from current conditions. Any hazardous materials would be handled and stored in accordance with applicable regulations and label precautions. As a result of operations there also would be an expected increase in solid waste. The management of this increase in solid waste generation would need to be addressed by the Pollution Prevention Program for the Academy.

During construction, small quantities of hazardous waste may be generated from vehicle maintenance activities, such as parts degreasing. The possibility for even these very small amounts of materials to migrate offsite or impact area natural resources would be insignificant by the use of common construction practices such as drip trays, mats, regular removal of fluids during longer vehicle storage periods, and the application of standard BMPs.

General office operations would occur in the facility. The facility would also contain an armory. The waste that would be generated from cleaning/maintaining fire arms and ammunition would be handled in accordance with existing guidance in the Hazardous Materials Emergency Planning and Response Plan (2008) and in coordination with the Hazardous Materials program manager.

In the event that a spill incident does occur, the Academy implements a Hazardous Materials Emergency Planning and Response Plan (2008) that describes preventative actions that should be taken to reduce the potential for hazardous materials from entering the environment and provides guidance concerning the containment and cleanup of spills. The Academy also has a Hazmat Management System for distributing hazardous materials and an IHMP Team for use at industrial shops on base (INRMP, 2008).

Any issues relating to the potential presence of lead, lead based paint, or asbestos containing materials would be the responsibility of the demolition contractor to address prior and during demolition of any structures, according to state and federal regulations.

#### **4.6.2 Alternative 2**

Impacts anticipated from Alternative 2 would be similar to those discussed under the Preferred Alternative.

#### **4.6.3 No Action Alternative**

There would be no changes to current operations as a result of the No-Action Alternative; thus no impacts would occur.

#### **4.6.4 Mitigation**

Hazardous waste impacts are to be expected during construction of the facility and need to be handled in accordance with the Hazardous Materials Emergency Planning and Response Plan (2008). The construction firm would be responsible for implementing appropriate practices and coordinating with the Academy hazardous waste program manager. Solid waste generation is not expected to increase due to operation of the Preferred Alternative.

#### **4.6.5 Cumulative And Long-Term Impacts**

The Preferred Alternative may cause short-term incremental impacts from the use of hazardous and toxic substances during construction when combined with future projects. Incremental impacts would also result from increased waste from heavy construction equipment (i.e. hydraulic fluid), addition of POVs,

and/or cleaners or solvents. Overall, cumulative impacts from hazardous and toxic substances would not be significant. Cumulative impacts from the generation of solid waste during operation of the ESC would be minor and would be addressed by the current Academy Pollution Prevention Plan.

## **5. LIST OF PREPARERS**

This EA has been prepared under the direction of the Air Force and the Academy. The individuals who contributed to the preparation of this document are listed below.

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An interdisciplinary team of biologists, planners, facility managers, engineers, and consultants conducted preliminary internal scoping of the project to identify the range of potential alternatives and resource issues.

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